

Abstract of the Disclosure

A communication system includes an  
encryptor and a decryptor. For improved  
encryption security, the encryptor includes a  
5 multitap delay line to produce mutually delayed  
samples of the signal to be encrypted. Each  
sample is operated on by a key or function to  
produce modified signal samples, and the  
modified signal samples are summed or combined  
10 to produce the encrypted signal. According to  
one aspect of the invention, at least one of  
the keys or functions includes a nonlinear  
function. In some embodiments, the functions  
are time-variant for improved security.  
15 Decryption is accomplished in some embodiments  
by an equalizer. The preferred equalizer is  
the maximum-likelihood-sequence estimators  
matched to the encryption functions. A Viterbi  
algorithm makes it easy to implement the  
20 matched equalizer. (124)